External Certification Authorities (ECAs)

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ECA Requirement

"Secure interoperability between DoD and its vendors and contractors will be accomplished using External Certificate Authorities (ECAs). ECAs will operate under a process that delivers the level of assurance that is required to meet business and legal requirements….Requirements for interoperable PKI-enabled services with Industry partners shall be met via certificates generated from an IECA or ECA."

[DoD PKI Memo, 12 August 2000]

"To ensure secure interoperability between DoD and its vendors and contractors, interoperability will be accomplished in the near term using External Certification Authorities (ECAs)."

[DoD Target PKI ORD, 20 August 2001]

"Components may … modify or adjust their implementation dates as required, but in no case beyond April 2004."

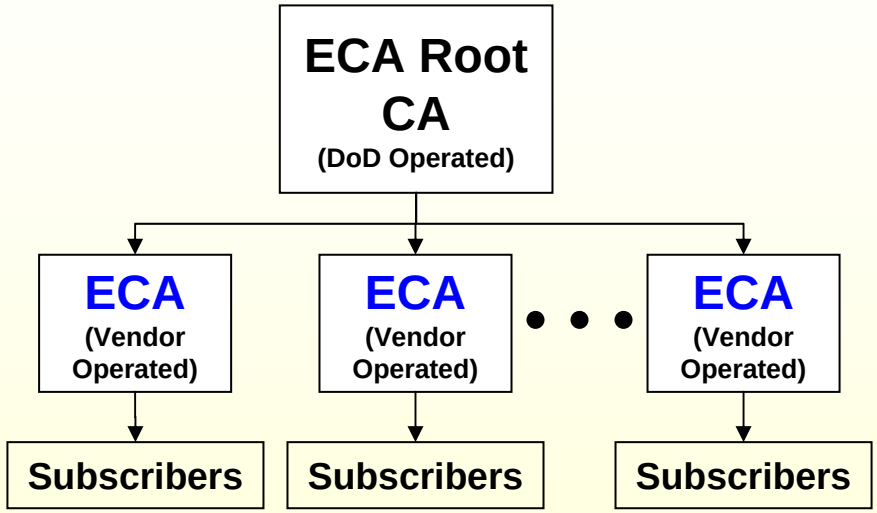
"The change in deadline for issuing CACs should not be considered a reason to slow PKI Implementation efforts, …"

[PKI and PKE Implementation Update, 7 October 2003]

ECA Background

- **Promote "Single Certificate" for Industry Partners across U.S. Government**
  - **Eliminate "DoD Only" usage requirement**
  - **Permit marketing and use of ECA certificates to support Federal, State, and Local Government needs**
- **Comply with DoD X.509 Certificate Policy**
- **Implement Cost-effective Solution for Industry Partners and DoD**
  - **Continue to seek and incorporate industry comments on functionality and assurance level**
- **Reduce or Eliminate GOTS requirements**

ECA Architecture



- **ECAs are operated by commercial vendors**
  - **Certificate fees are permitted**
  - **Certificate Revocation List (CRL) data available at no charge.**
- **The ECA Root CA will issue subordinate CA certificates to ECA vendors**
- **ECAs operate under MOAs and certificate and key recovery policies**

ECA Key Points

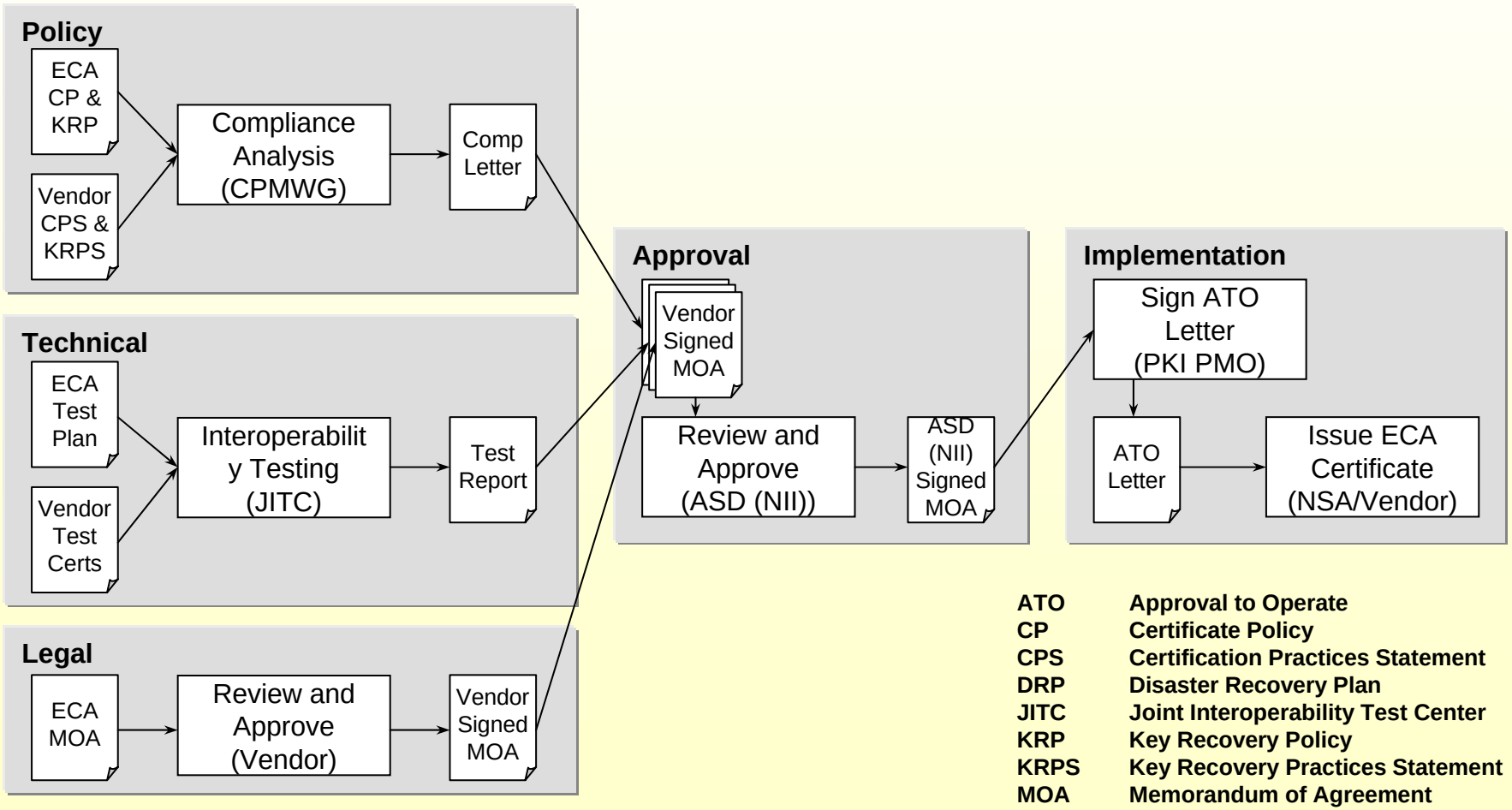
- **Certificate Management**
  - Puts the responsibility on the subscriber's sponsoring organization (generally their company) for keeping certificate information current
  - Registration infrastructure is provided by ECAs
- **Liability**
  - Cleanly separates DoD PKI from the ECA PKI
  - Explicitly removes liability from the DoD and the US Government for improper issuance and use of ECA certificates
  - ECAs must accept liability for improper operation but may limit liability to $1,000 per transaction and $1,000,000 per incident
- **Assurance Level**
  - Ensures that certificates issued under the ECA program meet minimum DoD requirements

Status of ECA Program

- ✓ ECA Certificate Policy and Key Recovery Policy Signed by the Hon. Mr. Stenbit, June 2003
- ✓ ECA Root Certification Authority Certification Practice Statement signed by Mr. Nolte, June 2003
- ✓ ECA Root Certification Authority established, June 2003
- ✓ ECA Interoperability Test Plan completed, September 2003
- ✓ ECA Memorandum of Agreement draft text approved, October 2003
- ✓ ECA Root CA testing completed, October 2003

Transition to ECA

Transition Approach



ATO	**Approval to Operate**
CP	**Certificate Policy**
CPS	**Certification Practices Statement**
DRP	**Disaster Recovery Plan**
JITC	**Joint Interoperability Test Center**
KRP	**Key Recovery Policy**
KRPS	**Key Recovery Practices Statement**
MOA	**Memorandum of Agreement**

Enabling Applications to Accept ECA Certificates

- **Testing the application**
  - **ECAs will not support test certificates - instead, ECA certificates have been fully tested prior to granting ECA status**
  - **Use test certificates from the DoD test PKI for application testing**
- **Architect and implement a process for granting access to external certificate holders**
  - **For example: Require that holders self-register to the directory, then have their DoD sponsor send a digitally signed email requesting that access be granted, then manually add subscriber to the appropriate access group**
- **Implement a mechanism for accessing ECA CRLs**
  - **Determine CRL access points from the ECA web site**
  - **If using OCSP, ensure that the OCSP responder is processing ECA CRLs**

Enabling Applications to Accept ECA Certificates (cont.)

- **Add the ECA Root CA to the application trust list**
  - **IECA CA Certificates and CRLs can be accessed from the ECA web site:**
    - **http://iase.disa.mil/pki/eca**
  - **In the future, ECA CA Certificates and CRLs will be posted to the Global Directory Service, and ECA CA Certificates will be included in the installroot tool**
  - **The ECA root will be submitted for membership in the Federal Bridge**
- **Provide guidance to help desk staff for addressing user requirements from IECA/ECA subscribers**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